

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF TELECOMMUNICATIONS AND CABLE  
SECOND SET OF INFORMATION REQUESTS OF THE DEPARTMENT OF  
TELECOMMUNICATIONS AND CABLE TO THE STATE 911 DEPARTMENT  
D.T.C. 18-2  
May 10, 2018

Responsible Person: Frank Pozniak

**D.T.C. 2-1** Refer to Exhibit A of the Petition.

- a. Please define the "Fringe" and "Indirect" categories of "Salary Costs."
- b. Please explain the increase in the allocation for "IT Services, Equipment" between Projected and Final FY2017 and projected FY2018.
- c. Please explain why Final FY2017 disbursements for "Training Grants" were lower than what was projected in FY2017.
- d. Please explain why there were no disbursements for Incentive grants in Final FY2017.
- e. Please explain why Final FY2017 disbursements for "PSAP Regional Development" and "PSAP Regional Development – Roll over" grants were less than those in Projected FY2017.
- f. Please explain the projected decrease in "E 9-1-1 Support" from Final FY2017 to Projected FY2018.
- g. Please describe "CPE Equipment," why the disbursements for this category in Final FY2017 were lower than projected in FY2017, and why no expense for this category is projected in FY2018.



**Response:**

- a. In accordance with the Commonwealth of Massachusetts Administration and Finance Bulletin No. 5, the 911 Department budgets fringe benefit and indirect costs on its trust account in compliance with the annual agreements.

Fringe costs as defined in the Office of the State Comptroller Expenditure Classification Handbook are "Mandated transfer of charges for pension, health insurance and terminal leave expenditures from federal grants, expendable trusts, capital accounts and all other non-budgetary accounts to centralized state administrative accounts. These costs also include employer share of Unemployment Compensation Insurance Premium (UI), Universal Health Insurance (UHI), and Medicare Tax (MTX). These latter charges apply to all accounts types."

Indirect costs as defined in the Office of the State Comptroller Expenditure Classification Handbook are "Mandated transfer of

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charges for indirect costs related to expenditures from federal grants, expendable trusts, and all other non-budgetary accounts to centralized state administrative accounts.”

- b. The increase in the allocation for “IT Services, Equipment” is associated with the hiring of an additional staff augmentation position to support the Wireless Center, Next Generation 9-1-1, Wireless Direct, Digital Logging Recorders, Text to 9-1-1 and regionalization projects.
- c. The FY2017 allocation for the Training Grant was based upon a percentage of the FY2016 (projected) revenues at the time of the guidelines were released. The Training grant is a reimbursable grant program. The FY2017 amount represents the eligible amount submitted by PSAPs and therefore paid out to PSAPs during the FY2017 accounting cycle, inclusive of the accounts payable period (July 1 – August 31).
- d. Expenses were incurred for the four Incentive Grant categories under the FY2017 grant program. These expenses are included in the overall expenses noted for the Support Grant.
- e. The projected amount noted for the “PSAP Regional Development” was the amount allocated to the grant in FY2017. The project amount noted and “PSAP Regional Development – Roll over” grants was the remaining balances in active projects from prior fiscal year development grant awards. The Development Grant is reimbursable. The FY2017 amounts represent the eligible amount submitted by PSAPs and therefore paid out to PSAPs during the FY2017 accounting cycle, inclusive of the accounts payable period (July 1 – August 31).
- f. The projected decrease in “E 9-1-1 Support” from Final FY2017 to Projected FY2018 is attributable to the transition to Next Generation 911. The “E 9-1-1 Support” contract was funded for only six months in FY2018. In addition, the level of support decreased monthly as PSAPs were transitioned to the Next generation 9-1-1 System.
- g. The disbursements for “CPE Equipment” category in Final

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FY2017 were lower than projected in FY2017 as a result of the transition to Next Generation 9-1-1. This is also why there were no expenses for this category projected in FY2018.



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**D.T.C. 2-2** Please provide an itemized breakdown of the specific cost categories contained within the projected expenditures for the "Statewide Radio Infrastructure" for FY2018-FY2023 in Exhibit C.

**Response:**

There are seven primary categories of costs associated with the CoMIRS Statewide Radio Infrastructure. These include:

1. Radio Site Preparation (\$16,222,000)
2. Radio Site Digital Equipment (\$52,220,000)
3. Central Switching Equipment (\$2,000,000)
4. Dispatch Console Equipment (\$3,728,000)
5. Subscriber Equipment (\$75,037,100)
6. FDMA Radio Site Upgrades (\$3,965,000)
7. Engineering and Project Management (\$9,434,000)

The total of these seven cost categories is \$162,606,100. Projects of this nature can achieve significant discounts if properly procured. Large procurements often result in discounts of 25% or more. Assuming a 25% discount (\$40,651,525) on the estimated total price, the estimated total cost of modernizing the CoMIRS radio network is \$121,954,575. In addition to this baseline cost, additional costs may be incurred if additional users are added to the radio network.

Citing from the CoMIRS Strategy Report Section 8.1.3 "Categories of Cost," each of the seven primary categories of cost is introduced below and a line item costing for each category is provided.

**Radio Site Preparation (Section 8.1.3.1)**

This Radio Site Preparation cost category includes the anticipated set of cost items that are likely to be incurred in preparing a radio site for digital modernization. These items cover site acquisition, existing equipment testing and replacement, and necessary upgrades to prepare the site to be used in the future digital radio network.

The envisioned digital CoMIRS radio network will include 94 digital radio sites that will broadcast and receive voice and data communications from tens of thousands of users throughout the Commonwealth. Twenty-four of these radio sites will be new

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to the CoMIRS network, and the remaining sites will need to be prepared to simultaneously broadcast both analog and digital communications during the modernization project.

Radio Sites			\$ 16,222,000.00	
Radio Site Preparation	Units	Cost per unit	Total	
Proposed Site Not Established - Site Search	0	\$ 300,000.00	\$ -	
Proposed Site Not Established - Tower	16	\$ 200,000.00	\$ 3,200,000.00	
Proposed Site Not Established - Equipment	20	\$ 180,000.00	\$ 3,600,000.00	
Antenna and feedline sweep	40	\$ -	\$ -	
Antenna and feedline replacement	30	\$ 50,000.00	\$ 1,500,000.00	
Combiner / Multi-coupler alignment	39	\$ 2,000.00	\$ 78,000.00	
Intermodulation Test (IM and PIM)	39	\$ 2,000.00	\$ 78,000.00	
Intermodulation Mitigation	0	\$ -	\$ -	
GPS Clock - Efratom Replacement	20	\$ 30,000.00	\$ 600,000.00	
UPS - Test / Repair / Upgrade / Replacement	52	\$ 30,000.00	\$ 1,560,000.00	
UPS - Test / Repair / Upgrade / Replacement	1	\$ 20,000.00	\$ 20,000.00	
Backup Generators (Existing) - Test / Repair	33	\$ 2,000.00	\$ 66,000.00	
Backup Generators (New) - Upgrade /	22	\$ 30,000.00	\$ 660,000.00	
Shelter Rack Space or Floor Space -	33	\$ 5,000.00	\$ 165,000.00	
Commercial Power - Audit / Heavy Up	126	\$ 5,000.00	\$ 630,000.00	
Automatic Transfer Switch	20	\$ 5,000.00	\$ 100,000.00	
R56 - Audit / Non-Compliance Mitigation	34	\$ 5,000.00	\$ 170,000.00	
Shelter AC Power Distribution - Audit /	33	\$ 5,000.00	\$ 165,000.00	
HVAC - Audit / Deficiency Mitigation	33	\$ 5,000.00	\$ 165,000.00	
Shelter Fire Protection	0	\$ -	\$ -	
Shelter Integrity	34	\$ 5,000.00	\$ 170,000.00	
Tower Integrity - Mapping - Load Analysis	37	\$ 5,000.00	\$ 185,000.00	
Tower Integrity - Structural Improvements	8	\$ 50,000.00	\$ 400,000.00	
Site Compound Security and Surveillance	56	\$ 10,000.00	\$ 560,000.00	
Compound Fencing and Surface Upgrade	22	\$ 50,000.00	\$ 1,100,000.00	
Site Road Access Upgrade	21	\$ 50,000.00	\$ 1,050,000.00	

**Radio Site Digital Equipment (Section 8.1.3.2)**

This Radio Site Digital Equipment cost category includes the anticipated set of digital equipment that is likely to be required in preparing a radio site for digital modernization. This includes transmitters, receivers, GPS clocks, combiners, multi-couplers, site controllers, simulcast controls, switches, routers, antennas, and related equipment for nearly 60 radio sites in central and eastern Massachusetts. Upgrades



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to the existing FDMA radio sites in western Massachusetts are costed out separately.

Radio Site Digital Equipment			\$ 52,220,000.00
Radio Site Digital Equipment	Units	Cost per unit	Total
LMR radio transmitters and receivers	345	\$ 50,000.00	\$ 17,250,000.00
Microwave radio transmitters and receivers	114	\$ 100,000.00	\$ 11,400,000.00
GPS Clock	25	\$ 30,000.00	\$ 750,000.00
Combiners, Multi-Couplers, and TT Amp	57	\$ 50,000.00	\$ 2,850,000.00
Site controllers	59	\$ 100,000.00	\$ 5,900,000.00
Simulcast prime/control point (Small)	3	\$ 50,000.00	\$ 150,000.00
Simulcast prime/control point (Large)	12	\$ 100,000.00	\$ 1,200,000.00
Switches and routers	74	\$ 30,000.00	\$ 2,220,000.00
Antenna feedline, waveguide, connectors,	57	\$ 40,000.00	\$ 2,280,000.00
Antennas (LMR)	57	\$ 10,000.00	\$ 570,000.00
Antennas (MW)	57	\$ 15,000.00	\$ 855,000.00
Installation materials (wire, cables,	59	\$ 5,000.00	\$ 295,000.00
Installation and configuration support (Site)	47	\$ 100,000.00	\$ 4,700,000.00
Installation and configuration support	12	\$ 150,000.00	\$ 1,800,000.00

**Central Switching Equipment (Section 8.1.3.3)**

The Central Switching Equipment cost category addresses the equipment and software license costs associated with upgrading the central components of the CoMIRS radio network. These upgrades and licenses are required to properly manage each of the radio sites added to the digital network. These cost items include upgrading the voice logging recorder, adding additional licenses for new sites, and upgrading the servers, routers, switches, and backhaul interfaces that comprise the Core components of the system.

Radio System Management			\$ 2,000,000.00
Central Switching (Core)	Count	Unit Cost	Total
Radio sub-system	1	\$ 500,000.00	\$ 500,000.00
Console sub-system	1	\$ 200,000.00	\$ 200,000.00
Voice logging recorder	1	\$ 300,000.00	\$ 300,000.00
Network management sub-system	1	\$ 300,000.00	\$ 300,000.00
Alarm reporting sub-system	1	\$ 100,000.00	\$ 100,000.00
Ancillary servers, routers, switches, backhaul interface	1	\$ 400,000.00	\$ 400,000.00
Installation and configuration support	1	\$ 200,000.00	\$ 200,000.00

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**Dispatch Console Equipment (8.1.3.4)**

The Dispatch Console Equipment cost category addresses an immediate need for the existing CoMIRS radio network. A review of the current state of the CoMIRS network identified a series of end-of-life issues with existing technology on the network. Key among these replacement needs are the aging and unsupported dispatch consoles currently in use by E-911 New Braintree PSAP, the E-911 Northampton Wireless PSAP, the E-911 Shelburne Falls PSAP, and seven other MSP dispatch locations. These 29 dispatch consoles must be replaced to install any more radio system network software updates.

Dispatch Consoles				\$	3,728,000.00
Dispatch Consoles	Count	Unit Cost		Total	
Consoles	29	\$	95,000.00	\$	2,755,000.00
Ancillary servers, routers, switches, backhaul interface	8	\$	60,000.00	\$	480,000.00
Installation and configuration support	29	\$	17,000.00	\$	493,000.00

**Subscriber Equipment (Section 8.1.3.5)**

The Subscriber Equipment cost category covers the replacement costs for portable, mobile, and desktop radios that are too old to be compatible with the planned P25 Phase 2 digital radio network. These costs estimates take into account the anticipated radio replacement needs for all operable users on the CoMIRS network, the largest of which is the Department of State Police. The MSP alone will require 6,150 replacement radios to communicate on the upgraded network.

Subscriber Units				\$	75,037,100.00
Mobile Radio Replacement		Units	Cost per unit	Total	
Mobiles - Units		7500	\$ 4,500.00	\$	33,750,000.00
Mobiles - Vehicular Installation		7500	\$ 300.00	\$	2,250,000.00
Mobiles - Programming		7500	\$ 25.00	\$	187,500.00
Portable Radio Replacement		Units	Cost per unit	Total	
Portables - Units		7500	\$ 4,500.00	\$	33,750,000.00
Portables - Accessories		7500	\$ 370.00	\$	2,775,000.00
Portables - Programming		7500	\$ 25.00	\$	187,500.00
Desk Radio Replacement		Units	Cost per unit	Total	
Desk Radios - Units		284	\$ 4,500.00	\$	1,278,000.00
Desk Radios - Antenna System w Install		284	\$ 3,000.00	\$	852,000.00
Desk Radios - Programming		284	\$ 25.00	\$	7,100.00



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**FDMA Radio Site Upgrades (8.1.3.6)**

The FDMA Radio Site Upgrades cost category covers the upgrade of the existing P25 Phase 1 (FDMA) radio sites serving western Massachusetts to P25 Phase 2 (TDMA). This upgrade is needed to improve the overall capacity of the network, particularly when users and radio equipment moves between counties of the state.

<b>Radio Site Upgrades (P25 Phase 1 to Phase 2)</b>	<b>\$ 3,965,000.00</b>
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Radio Site Preparation	Units	Cost per unit	Total
Antenna and feedline modification for Diversity			
Antenna	10	\$ 2,500.00	\$ 25,000.00
Feedline	10	\$ 5,000.00	\$ 50,000.00
Installation	10	\$ 22,500.00	\$ 225,000.00

Radio Site Digital Equipment	Units	Cost per unit	Total
Base Station TDMA Licenses	210	\$ 10,000.00	\$ 2,100,000.00
Site controllers TDMA License	16	\$ 10,000.00	\$ 160,000.00
Simulcast prime/control point - TDMA License	12	\$ 10,000.00	\$ 120,000.00
Switches and routers	550	\$ 1,000.00	\$ 550,000.00
Installation and configuration support	175	\$ 1,000.00	\$ 175,000.00

Central Switching	Units	Cost per unit	Total
Radio sub-system - TDMA License	400	1000	\$ 400,000.00
Console sub-system TDMA License	80	1000	\$ 80,000.00
Installation and configuration support	80	1000	\$ 80,000.00

**Engineering and Project Management (8.1.3.7)**

The Engineering and Project Management cost category covers the planning, engineering, financial management, procurement management, and project management activities needed to assure the overall success of the radio modernization project.



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<b>Engineering and Project Management</b>			<b>\$ 9,434,000.00</b>
<b>Engineering and Project Management</b>	<b>Units</b>	<b>Cost per unit</b>	<b>Total</b>
Detailed engineering design and procurment	73	\$ 15,000.00	\$ 1,095,000.00
FCC License coordination			
Region 19 Application Prep	57	\$ 5,000.00	\$ 285,000.00
APCO Freq Coordination	84	\$ 1,000.00	\$ 84,000.00
M/W Frequency Coordination	57	\$ 5,000.00	\$ 285,000.00
Project coordination and oversight	7235	\$ 1,000.00	\$ 7,235,000.00
Decommission Surplus Analog Site	9	\$ 50,000.00	\$ 450,000.00

Additional site level detail is provided in the CoMIRS Costs and Financing (Section 8) of the CoMIRS Strategy Report.

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**D.T.C. 2-3** Please provide the dollar amount awarded under each grant program in FY2017, by individual PSAP. Please include in this breakdown separate amounts for "Training Grant" and for "EMD/Regulatory Compliance Grant."

**Response:**

Please see Attachment D.T.C. 2-3(1). This information was inadvertently omitted from the 911 Department's Responses to the First Set of Information Requests in this proceeding.

Please also see Attachment D.T.C. 2-3(2) that includes Attachment A to D.T.C. 1-13 that displays all columns. Upon further review, it appears that columns did not display properly in the copy submitted with the response to the First Set of Information Requests.

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**D.T.C. 2-4** Please provide the dollar amount disbursed to awardees under each grant program in FY2017 and in FY2018 through March 31, 2018, by individual PSAP. Please include in this breakdown separate amounts for "Training Grant" and for "EMD/Regulatory Compliance Grant."

**Response:**

Please see Attachment D.T.C 2-4 for the dollar amount disbursed to awardees under each grant program in FY2017 and in FY2018 through March 31, 2018, by individual PSAP. This includes a breakdown of separate amounts for "Training Grant" and for "EMD/Regulatory Compliance Grant."



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**D.T.C. 2-5** Please describe the "Digital Logging Recorders" referred to in the 911 Department's response to D.T.C. IR 1-9, and explain why they need to be replaced.

**Response:**

The Digital Logging Recorders record the voice traffic on the 9-1-1 system at the PSAP. The Digital Logging Recorders were installed in 2012 and 2013 making the equipment over five (5) years old at this time. It is not uncommon for IT type equipment to have a life cycle of five (5) years.

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**D.T.C. 2-6** Refer to 911 Department's response to D.T.C. IR 1-9 and D.T.C. Docket 17-1 Evidentiary Hearing Transcript at Page 18. Please explain the 911 Department's decision to establish a third data center and what circumstances changed that affected that decision.

**Response:**

The recent storms of this past winter and spring demonstrated the power of weather to disrupt basic necessities such as power and communications. Even though the two data centers in Massachusetts that are part of the Next Generation 9-1-1 System are separated by approximately 40 miles, the scale and scope of the storms disrupted power distribution and transportation for a large geographical region in Massachusetts that exceeded the distance that separates the two data centers. Though the storms did not interrupt Next Generation 9-1-1 services in the Commonwealth, both data centers, as well as a number of PSAPs, had impacts to their commercial power sources. If the storms had continued with increasing amounts of snow and/or high winds, it could have affected the ability of the data centers to get commercial power restored or the ability to have tanker trucks refill diesel supplies running generators. Thus, the 911 Department has decided to proceed with General Dynamics' recommendation for a third data center in a geographical area outside of Massachusetts, in a region unlikely to be effected by the same weather or natural disaster event as the two data centers in the Commonwealth. The addition of the third data center, which will not be located in New England, should significantly increase the ability for the Massachusetts Next Generation 9-1-1 System to overcome any natural disaster or severe weather patterns.

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**D.T.C. 2-7** Please provide an itemized breakdown of the specific cost categories contained within the projected expenditures in FY2019-FY2023 for NG911 Equipment, as stated in the 911 Department's response to D.T.C. IR 1-9.

**Response:**

The NG911 equipment noted in the projected expenditures in FY2019-FY2023 can all be categorized as Information Technology equipment. The 911 Department anticipates the need to enhance/upgrade the storage capacity at the data centers, the devices supporting the emergency service routing proxy, the media service high availability devices in the data centers, Ethernet switches, routers, customer premise equipment needs to support regionalization, and other system components that may require enhancement/upgrade/replacement as the 911 Department moves forward with Next Generation 9-1-1.



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**D.T.C 2-8** Please identify any potential sources of revenue the 911 Department is evaluating other than Surcharge revenue, including federal grants such as the National Telecommunications and Information Administration/National Highway Traffic Safety Administration's 911 Grant Program.

**Response:** The 911 Department has no pending applications for federal funding or any other potential sources of revenue at this time.

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**D.T.C. 2-9** Refer to the 911 Department's response to D.T.C. IR 1-7(a). Please explain who commissioned the CoMIRS Radio Modernization Strategy Report, referenced on Page 15 of the Petition, and is there a final, complete version or is the document still being drafted/edited. Please identify the author(s) of the report and provide any pages not already provided, such as the cover page, introduction, and appendices. Please provide a copy of any other documents the 911 Department relied on in determining whether to proceed with the CoMIRS modernization plan reflected in the Petition and the financing option that the 911 Department has chosen to allow for the plan's implementation.

**Response:**

Public safety radio modernization has been a pressing concern for the Commonwealth for over a decade. In 2012, counties in western Massachusetts were upgraded to digital radio with the assumption that the digital network would be extended eastward for the rest of the Commonwealth. This never happened.

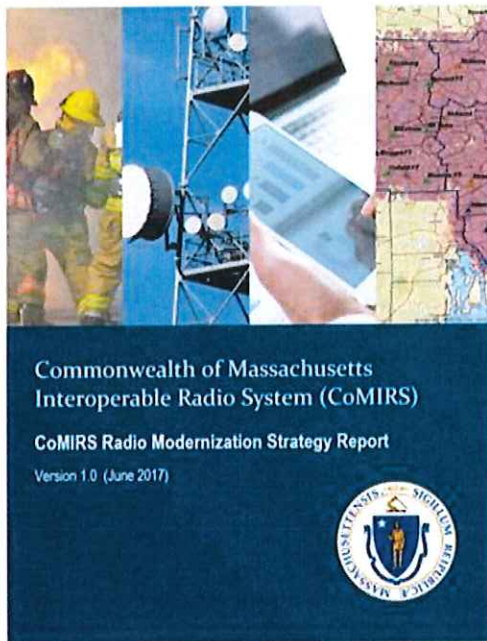
In 2015, EOPSS led discussions with the Executive Office of Administration and Finance to discuss funding for the complete modernization of the CoMIRS radio network. As part of those discussions, it was determined that the CoMIRS Strategy Report was needed.

A procurement was issued on COMMBUYS under requisition number RQ- 16- 1044- 1044C- 1044L- 00000061124. This procurement was entitled "Request for Quote (RFQ) for ITS53 Information Technology Professional Services to Develop a Strategy and Roadmap for the Implementation of a Comprehensive Statewide Radio Communications Network." This RFQ was issued on December 21, 2015, by the Executive Office of Public Safety and Security. xFact, Inc. of North Andover was selected at the vendor. The primary result of that project was the CoMIRS Strategy Report, Version 1.0.

The original version (Version 1.0) of the CoMIRS Strategy Report included the following sections:

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Version 1.0 is the accepted final version of the Strategy Report. As with other major reports, this document is planned to be updated periodically to reflect changes in requirements, technology, funding, and governance decisions.

Sections 1, 2, 3, 5, 6, and 8 of Version 1.0 were provided as attachments in response to DTC Question 1-7 (a). These sections represent the accepted sections of the CoMIRS Strategy Report. Together, these sections provide a complete description and analysis of the needs of the public safety radio communications in the Commonwealth.

Sections 4 and 7 were originally intended to be sections in the Version 1.0 deliverable and as such were included in the original draft Table of Contents. Content for these sections were received in draft but after initial review it was determined that this content could be best managed by the CoMIRS Program Management Office using other project



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management tools (other than a largely static report). Since these were originally planned as sections for the final report, these sections appear on the Table of Contents. To limit confusion to those with draft version of the Strategy Report, the section numbering was not changed in the final Version 1.0 report. When the Strategy Report is next updated or refreshed, these sections are planned to be removed and the other sections renumbered as appropriate.

Section 4 "Future Vision" was intended to depict a conceptual direction for the expanded use of the CoMIRS radio network. Section 4 requires a re-evaluation and re-write depending upon key decisions yet to be made about the CoMIRS network, including levels of available funding and whether or not additional state agencies may want to partner in the development and use of the network. It was determined that the content of this section would best be handled in PowerPoint presentations about the network, as opposed to a section in the Strategy Report.

Section 7 "Implementation Issues" was intended to list the challenges with implementing a network. This content was provided in draft in a table format, as is typical of issue management methodologies. Similarly, this content was determined to be best treated as a Program Management Office (PMO) responsibility and will be included as part of the CoMIRS PMO's program management responsibilities going forward.

In printed versions of the Strategy Report distributed in the summer of 2017, Sections 4 and 7 showed as the following:

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**Section is pending finalization.**

Various supporting documents were received from the strategy consultants. These documents were originally intended to be attached as "Appendices" to the document. However, no Appendices were included in the document.

These documents include PowerPoint presentations of report content, agency interview questionnaires, notes from stakeholder interviews, a glossary, and other work products used to create the Strategy Report. These files are maintained by the CoMIRS project management but are not formally included as appendices to the document.

By design, each section of the Strategy Report was intended to be complete in and of itself. As such, each section includes its own "Introduction" specific to the content of that section.

For an overall understanding of the Strategy Report, please refer to Section 1 "Executive Summary".

Please also see the binder spine, attached as Attachment D.T.C. 2-9(1) and the cover page, attached as Attachment D.T.C. 2-9(2). There is no introduction to the Report.

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**D.T.C. 2-10** Please define and identify categories of “*operable users*” as that term is used 911 Department’s response to D.T.C. IR 1-7(c).

**Response:**

In the CoMIRS Strategy Report, operable and interoperable communications are described in the introduction to Section 2 “Current State Assessment and Key Findings.”

This section reads:

“This review focuses on the current state of operability for the individual users of the statewide radio network and the interoperability of users that communicate on a day-to-day basis on another network or a subnetwork within the statewide radio network. For this review, **operable communications is defined as the ability of public safety users to establish and sustain communications in support of day-to-day mission objectives.** These operable communications tend to be within a single jurisdiction, discipline, and/or organization. **Interoperable communications is the ability for public safety professionals to communicate across jurisdictions, disciplines, and/or levels of government when the need arises and as authorized.** System operability is a required prerequisite for system interoperability.”  
*[emphasis added]*

So for CoMIRS, an “operable user” is one that requires the use of CoMIRS on a daily basis for routine communications. An “interoperable user” is one that primarily relies on other radio or voice communications networks on a daily basis but will utilize CoMIRS to communicate with other agencies and jurisdictions in times of emergency, major events, and cross-jurisdictional matters.

Further in Section 2.1.3 “Who Uses CoMIRS” in the CoMIRS Strategy Report, the major operable and interoperable users of CoMIRS are depicted in Figure 2-8 “User Base by Agency”. In this figure, “primary users” is synonymous with “operable users”.



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Figure 2-8 below shows the breakdown of devices used by primary users for day-to-day operations and those that primarily use the system for interoperable communications. The State Police (8,428 devices) and Barnstable County (3,638 devices) are the largest operable users of the network. Massport (2,049 devices) and the cities of Worcester (2,212 devices), Boston (2,032 devices), and Cambridge (1,480 devices) are the largest interoperable users.

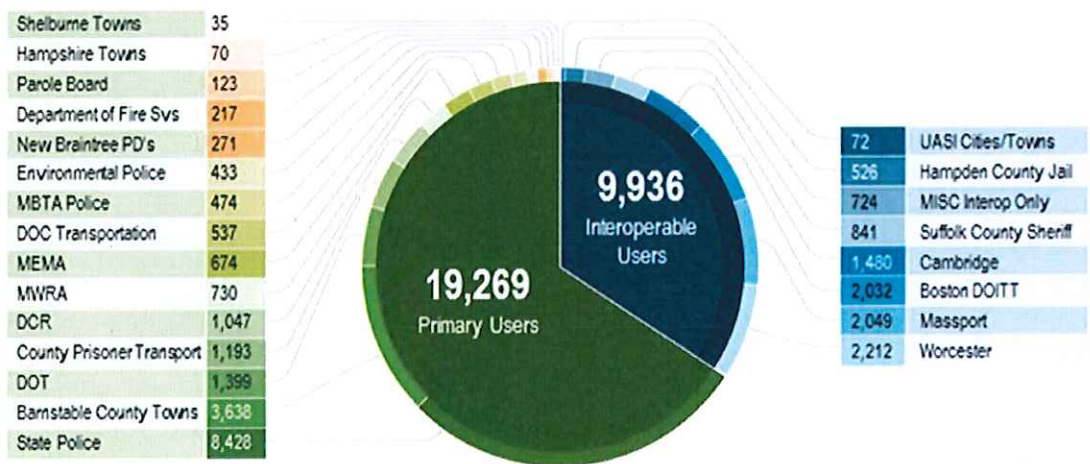


Figure 2-8: User Base by Agency

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**D.T.C. 2-11** Refer to 911 Department's response to D.T.C. IR 1-3(a).

- a. Please provide the projected number of dispatcher positions for the Wireless Center;
- b. Please provide an itemized breakdown of the projected recurring and non-recurring costs for the Wireless Center for FY2019-FY2023, including the specific cost categories contained within each.

**Response:**

- a. The projected number of dispatcher positions for the Wireless Center is sixteen (16).
- b. Please see below for an itemized breakdown of the projected costs for the Wireless Center for FY2019-FY2023:

**Recurring Costs:**

• Salary	\$3,241,312
• Overtime	\$1,098,977
• Buyouts/stipends/Shift Differentials	\$137,320
• Fringe benefit assessment	\$1,158,897
• Payroll tax assessment	\$ 63,134
• Indirect Cost assessment	\$1,210,745
• Employee Reimbursements	\$16,500
• Administrative Expenses	\$58,600
• Facility Expenses	\$10,000
• Utilities	\$18,500
• Operational Services	\$7,000
• Equipment	\$50,000
• Maintenance –Equipment	\$9,000
• Building Maintenance	\$11,750
• IT expenses	\$1,500
• Indirect costs	\$2,298

**Non-Recurring Costs:**

• Capital Expense	\$500,000
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**D.T.C. 2-12** Please refer to the 911 Department's response to D.T.C. IR 1-7(d). Please identify which, if any, of the 245 agencies and organizations pay fees to use the CoMIRS system, to whom such fees are paid, and the amount of such fees. In addition, state whether the 911 Department plans to impose any such fees during or upon completion of the proposed upgrade.

**Response:**

The Department of State Police annually assesses a chargeback to state agencies that utilize the radio network on a daily basis as a function of their daily operations. There are no user fees assessed to local agencies nor are their fees assessed to state agencies that only use the radio network for interoperable communications.

In correspondence with state agencies, the MSP utilizes the following language concerning the chargeback:

"In accordance with Chapter 159, of the Acts of 2000, the State Police have been authorized to assess a user fee on state agencies and authorities that utilize the statewide 800 MHz radio network.

As in the past, the assessed fee will be used to provide a cost-recovery mechanism to assist in off-setting the expenses of the radio system maintenance contract."

Fees are calculated based on how many radios the agency has active on the CoMIRS network. The current fee assessment is \$22.83 per month per radio. In 2018, fees were paid by the following agencies in the following amounts:

- Bristol County Sheriff's Office (\$1,390.00)
- Department of Correction (\$4,932.00)
- Department of Fire Services (\$18,343.00)
- Department of Youth Services (\$556.00)
- Emergency Management Agency (\$9,171.00)
- Hampshire Sheriff's Department (\$3,613.00)
- Massachusetts Department of Transportation (\$834.00)
- Norfolk County Sheriff's Office (\$13,618.00)



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Considering potential future assessments, a discussion about the use of fees for radio usage is included in the CoMIRS Strategy Report in Section 3.3.3 "Finance Findings." Of the four states highlighted for analysis, two states (Michigan and Colorado) utilize some sort of subscriber fees to partially finance their radio networks. These fees have shown to be of mixed value. For instance, in Section 3.3.3.2 "Michigan Finances" the collection of fees for use of the Michigan Public Safety Communications System (MPSCS) is described this way:

"MPSCS is a state level system that is made available to other agencies. Non-state users are required to pay a subscriber fee. The subscriber fee was initially set at \$350 per radio, per year. This fee proved to be too high for many of the smaller users and MPSCS adjusted the subscriber fee to one based on the number of talk groups. This also proved to be unworkable. Currently MPSCS has a much simplified cost structure – a one-time activation fee per radio of \$250. When interviewed, the director of the MPSCS stated that the activation fees collected do not provide a significant source of funding, but they continue to collect it because of state mandates. While Michigan charges additional set-up fees for data users, consoles, and 800 MHz fire paging, these are one-time charges."

While no decision has been made concerning changes to usage or activation fees, the CoMIRS Strategy Report does discuss the use of user fees as a recommended option for on-going operational funding. The Report does not recommend these fees for capital expenditures, including the financing of the digital radio infrastructure buildout and subscriber radio replacement. These financing options and recommendations can be found in CoMIRS Strategy Report Section 8.2.5 "Recommended Financing Options."

Looking at a potential source of on-going financing of operational costs, the CoMIRS Strategy Report does provide the following analysis of how these operational funds can be funded in part by usage, membership, or activation fees:

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Looking at Minnesota's roughly \$10 million operational costs for comparison, an example user fee of \$20 per device per month would generate approximately \$4.5 million in revenue from CoMIRS users. There are 18,856 identified active operational radios on CoMIRS. Twenty dollars a month or \$240 per year would generate \$4,525,440.00 from these 18,856 devices. This example fee would cover nearly half of Minnesota's annual operating expenses.

Agency (Operable on CoMIRS)	Network Radio Count	Total Annual User Fees (\$20/device/month)
Massachusetts State Police	7,235	\$ 1,736,400.00
Barnstable County Cities and Towns	3,700	\$ 888,000.00
County Jails Prisoner Transportation	1,700	\$ 408,000.00
Department of Transportation	1,400	\$ 336,000.00
Dept of Conservation and Recreation	1,050	\$ 252,000.00
MWRA	730	\$ 175,200.00
Mass. Emergency Management	674	\$ 161,760.00
Department of Corrections-Transport	537	\$ 128,880.00
MBTA Police	474	\$ 113,760.00
Mass. Environmental Police	433	\$ 103,920.00
New Braintree E-911 Towns	271	\$ 65,040.00
Department of Fire Services	217	\$ 52,080.00
Barnstable Sheriff	207	\$ 49,680.00
Board of Parole	123	\$ 29,520.00
Northampton E-911 Towns	70	\$ 16,800.00
Shelburne E-911 Towns	35	\$ 8,400.00
<b>Total</b>	<b>18,856</b>	<b>\$ 4,525,440.00</b>

Figure 8-56: Example Total Revenue from a \$20 per Device per Month User Fee

At \$20 per device per month on CoMIRS, the Massachusetts State Police would be responsible for the largest annual user fees at \$1,736,400, followed by the cities and towns of Barnstable County at \$888,000 and county jail prisoner transportation at \$408,000. If user fees are to be utilized, a determination would need to be made as to how these fees would be paid, since they would affect municipal, county, and state budgets.

At this time, neither EOPSS nor the 911 Department plans to impose any such fees during or upon completion of the proposed upgrade.